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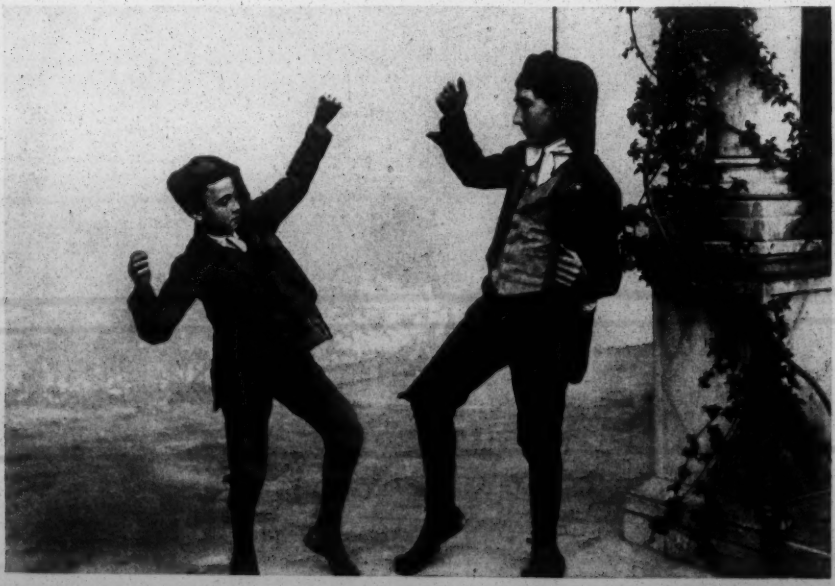

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SICILIAN BOYS DANCING THE TARANTELLA

(See Bulletin No. 1)

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Catania: Press Box for Etna Eruptions

ETNA is in eruption again. Lava may engulf this slope or that; news of the flow, of houses crushed, of orchards ruined, of people in flight, comes from Catania. That village is the "press box" for every Etna display.

To the Catanian who loves his modern city, Etna has been a benefactor. To the traveler in search of antiquities it has been a despoiler, for ancient Catania of Greek, Roman, Saracen and Norman days is buried, save for a Greek theater, a Roman amphitheater, some baths and a few unimportant monuments.

Catania Remembers Her Famous Son, Bellini

Catania is more interested in wide thoroughfares, public squares and parks, and in honoring her illustrious sons than in digging up ancient relics of a restless past. Bellini the composer, best known for his *Norma*, was born there in 1802 and Catanians are not allowed to forget it. A statue of the composer adorns Villa Bellini, one of the city's finest parks where on summer evenings one can sit and listen to Italian melodies played by a fine Sicilian band. The vine-clad slopes and the peak of Mount Etna form a magnificent background.

Another statue of the composer adorns the Piazza Stesicoro through which runs the Via Etnae, Catania's main street from the southern part of the city to the foot of the great mountain. A third statue stands among those of kings and great Italian and Sicilian patriots in the cathedral. There is also a Bellini Theater, once the finest in Italy, and the Catanian guides point with pride to the tablet which marks the house in which the composer was born.

Cathedral Built by Roger, a Norman Invader

American tourists are impressed with this loyalty, but they are thrilled when they learn that their modern hotel faces the Via Lincoln, the main thoroughfare from the railroad station and one of the three principal arteries of the city leading from the sea to its western extremity. The other two avenues honor Garibaldi, the patriot, and Victor Emanuel, the king.

The cathedral, and a lava elephant atop a tall marble base at its front door, are two of the most popular monuments of early Catania. The elephant's origin is unknown, but the cathedral is credited to the prosperous reign of the Norman King Roger. Built in 1091, it was badly damaged by successive earthquakes and eruptions of Mount Etna, but each time it has been restored and used.

More honored than even the kings' monuments in the cathedral is that of St. Agatha, Catania's patron saint. Among her relics is a veil which is said to have miraculously diverted a lava stream that menaced Catania in 1669.

Once a year, in February, Catania turns out multitudes to honor her. The statue, mounted on two long poles, is borne through the streets from church to church by white-robed men. The route of the procession is jammed to suffocation, old balconies groan under the weight of humanity and every roof has its quota of spectators. At night torchlight processions light up the city and in nearly every window a candle or two throws feeble beams. The yelling and whistling and confusion of the day continue, augmented by the booming of colorful fireworks, the toll of church bells and the occasional roar of a cannon.

Photograph by H. A. V. Coles, © Illustrated London News

A FAMOUS SCIENTIFIC DETECTIVE PREPARED TO REPEAT HIS DARING ADVENTURE

Norbert Casteret, French explorer, made his way into a cave until the stream touched the roof. Believing that there might be remains of prehistoric men in dry caves beyond, he swam an underground stream until he reached a new cavern. There he found figures modeled by prehistoric cave dwellers (See Bulletin No. 4).

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Enthronement Ceremonies of Japan's 124th Emperor

THE SOKUI REI (Ascend Throne Ceremony), first of two ancient rites by which Japan's new Emperor Hirohito confirms his accession to the throne, took place November 10, in Kyoto.

The second ceremony, the Daijo Sai (Great New Food Festival) followed on November 14.

These two rites and their significance to the Japanese people are outlined by Dr. Gilbert Grosvenor, president of the National Geographic Society, who has just returned from a tour of Japan and other Far Eastern countries.

"The ceremonies," says Dr. Grosvenor, "follow nearly two years after Senso, the act of accession, which took place in the early hours of December 25, 1926, immediately after the death of the late Emperor.

Sacred Mirror, Sword, and Beads Figure in Ceremony

"The long interval is not unusual since custom requires a year's mourning and another year to grow rice blessed for use in the Daijo Sai.

"On November 6, Emperor Hirohito and his court left the modern capital, Tokyo, accompanying the most sacred relics of Japan in impressive procession to the ancient capital, Kyoto. These relics number three and are symbols of kingship like the crowns, scepters and great seals used by Western nations.

"Of the three the most revered is the Kashiko Dokoro (Sacred Regalia Mirror) which, according to Shinto tradition, Amaterasu-Omikami, the Sun Goddess, gave to the first ruler of Nippon as an emblem of sovereignty. The mirror, which is carried to and from the special train in state on the shoulders of 32 selected boys from the village of Yase, is not the real mirror, but the only existing replica of the original which has been enshrined since the time of Christ in the ancient Temple of Ise. The replica is said to be of metal cut in the lotus petal design. Temple fires it has survived have left their scars upon the sacred emblem.

"Kusanagi (the Grass Mower Sword) and Yasakani no Magatama (the Ever Very Bright Green Curved Jewels) are the other two treasures. Again, in the case of the ancient sword, a replica appears in the ceremonies. As events progress messengers hasten from Kyoto carrying news of the enthronement to Atsuta Temple (and also Ise) where the original god-given 'Excalibur' lies enshrined. Indeed, of the three treasures which the Emperor and Empress accompany to Kyoto, only the jewel string of irregular and curiously shaped beads is original. It has been handed down from one ruler to another. Hirohito is 124th in direct succession.

The Nation Shouts "Banzai" to the New Emperor

"An old mirror, an antiquated sword, some rough beads, these talismans, simple beside the galaxy of gems and precious metals that go with a European coronation, confirm the Emperor of Japan in his title. The sharp contrast with European equivalents holds true throughout the enthronement cycle. Austere rites express reverent tribute to the pioneer forefathers of the nation.

"At 10 o'clock November 10, the Emperor and the Empress enter the Shunkyo Den, a curved-eaved, broad-roofed, temple within the Kyoto palace grounds. Members of the royal family, court officials and representatives of foreign nations take their places in long audience halls. With the sacred sword and the sacred

The Second Largest City of Sicily

The St. Agatha celebration is only once a year. Before and after, Catania is busy with its commerce and industry. The harbor is filled with commercial craft whose flags add a colorful touch to the view from the Flora della Marina, a narrow but beautiful parkway near the water's edge.

Catania is the second largest city in Sicily and one of the island's chief export ports through which some 600,000 tons of merchandise pass annually. Sulphur, fruit and wine have made fortunes for Catanians. This trade and other industries keep many of the city's 271,000 inhabitants employed.

Bulletin No. 1, December 3, 1928.

© *Photograph by O. C. Havens*

DR. NEIL M. JUDD AT WORK IN PUEBLO BONITO

A spade is not the chief instrument with which a scientific investigator solves the mysteries of the past. A camel's hair brush, and a small trowel are the major tools of an archaeologist. He "sifts the evidence" by passing the dirt taken from an excavation through a fine mesh screen (See Bulletin No. 4).

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Macao: A Bit of China Owned by Portugal

ONE OF THE first acts of the new Chinese government was an appeal to foreign nations to give up certain treaty rights.

In the past centuries nations trading with China have obtained ports, special judicial rights, and other privileges which have since been the subject of protest by China.

Some of China's territory, like that once controlled by Germany and later by Japan at Tsingtao and by England at Weihaiwei, has been returned. Other nations have promised to surrender special rights when they have been given assurance that a stable government has been established in China.

Macao Provides Summer Resort for the Cantonese

Macao is the patch of China which has been longest under foreign ownership and control.

Not only is Macao the site of the first European claim staked out in China, but it has close cultural ties with Europe. It contains the oldest ruin in China that is associated with Europe. Tamarind and banyan trees shade the gardens where the Portuguese Chaucer, Camoens, composed half of the The Lusiad, one of the half dozen of the world's great epics. If history did not record the lasting debt that Europe owes to Portugal for reaching out to every quarter of the globe, Camoens, at Macao, would have left in his immortal epic a noble monument to Vasco da Gama and other heroes of Lusitanian caravels.

Once in Macao the traveler may remain to contemplate an out-of-the-way shrine of European history. But that is not why most folk board the daily boat from Hongkong to go there. It is a summer resort for the Cantonese because of its exposure to the cooling monsoons in mid-summer. From an airplane the mile-wide tongue of land between the two rocky hills that mark its boundaries is splotched with brilliant colors, radiating from the tile roofs of its blue, green, red and yellow houses.

He who lands on a steamer is captivated by its blend of Portuguese and Chinese, by pagoda and occidental church, and when the summons of hunger leads him to a hotel that has been called the cleanest and most beautifully situated in the Orient, the contrast persists. He may order the famous Portuguese colares with his yellow water chestnut pasties, and choose either ultra-occidental game dinners or pudding of coagulated duck's blood and sugar-preserved bamboo shoots. But 4,000 Portuguese reside in Macao, yet they represent a four-century impress their nationality has made upon the total population of about 75,000.

Camoens, Shipwrecked, Swam Ashore With His Poems

After dinner the visitor may stroll along the Praya Grande, both the Broadway and the Riverside Drive of Macao. Having shopped he finally will be led to catch the deeper romance of the city in the grotto where other poets have carved lines of praise to the one-eyed soldier poet who wrote the glory of farthest west Europe on an island of nearly farthest east China. Camoens was shipwrecked on his way to Lisbon and tradition says he swam ashore clutching some five or six cantos of his poem.

jewels beside him the Emperor worships and reads a proclamation to the Spirit of Amaterasu-Omikami.

"In the afternoon the Emperor goes to the Shishin Den, another long-roofed temple constructed of Japanese cypress. Here he mounts a black lacquer throne, curtained in costly silks, and surmounted by gilded phoenix birds. The throne faces an open court. On the left is a cherry tree; on the right, an orange tree. Ranging on either side below on the white sanded courtyard stand members of the royal guard in ancient court costumes. They carry bows and arrows. Next come gong-players and their gongs, drummers and their drums. Over their heads float richly embroidered, vertical banners, each with its special design.

"At the appointed moment the Emperor rises and announces his accession to the throne. Next the Prime Minister reads an address of congratulation while all the guests, all those outside the gates, all Japanese in Kyoto, all Japanese in the Empire impatiently await the great moment. The Prime Minister finishes. The exact instant of his next act has been made known throughout the islands. He leads a cheer, *Banzai! Banzai! Banzai!* Outside the gates the waiting multitudes take it up. Everywhere loyal Japanese cry *Banzai* to the new Emperor.

Emperor Celebrates Food Festival in Yuki Hall and Suki Hall

"The Daijo Sai or Great New Food Festival which follows four days later is a communion service. Customs governing it date back so far that students find in them evidence of the way Japanese lived in the early days of the Empire.

"Within the palace grounds have been built side by side two identical, primitive, thatch-roofed, reed-walled dwellings called Yuki Hall and Suki Hall. Standing on piles and with their roof-beams projecting beyond the gables, the two halls, inclosed by a rush-fence barrier, bear a startling and unmistakable resemblance to South Sea long houses.

"Late in the afternoon the Emperor, barefoot, leaves the imperial palace, shielded overhead by a sedge umbrella and underfoot by a mat which is unrolled before him and rolled up after him. Entering a *torii* (gate) in the rush fence he comes first to a small purification building where he dons a simple hemp garment and bathes in a curious bathtub of ancient design.

"Then court musicians at the Cook House strike up the Song of the Pounding of Rice and the cooks begin to prepare the rice from two fields which were selected and planted early in the spring. Meanwhile the Emperor, accompanied by men with torches, passes to the Yuki Hall. Once within he takes his place on a mat near a reed couch-throne undoubtedly similar to those used by early kings. Again he cleanses his hands after which two food mats are placed before him, one for himself and one for Kami, the spirit of the Sun Goddess, the mythical Progenitrix of the Japanese people.

Rice, Fish (Fresh and Dried), Fruit and Seaweed Broth for Ruler

"A marvelous procession now approaches Yuki Hall bearing the materials for communion; a maiden carries a primitive toothbrush, another a box containing old-fashioned chopsticks like sugar tongs, primitive leaf dishes, steamed rice and millet, fresh fish, dried fish, fruit, Awabi broth, seaweed broth, and black and white sake. After the Emperor has eaten with the spirit of Kami he prays.

"The Yuki Hall ritual ends soon after midnight and about 2 a. m. the Emperor enters Suki Hall where he repeats the same ceremonial and in the first gray of the dawn he completes the final important rite of Japanese enthronement."

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True Mystery Stories

EVERYONE likes a good mystery story.

Such a one—and a true story—has come to light in Italy, where a professor won success after 20 years of labor as a scientific detective.

The mystery surrounded the Etruscans, a people whose army threatened Rome until "up rose brave Horatius," who, with two companions, held back the attack while his countrymen cut away the bridge piers. "Back ere the ruin fall," they cried, but Horatius, weighted by Armor, was drowned in the Tiber.

Rome rose to glory but the Etruscans vanished from the face of the earth. To-day in Tuscany plows turn up their pottery and statuettes. Their language has been preserved, but nobody has been able to read it. Professor Trombetti, of the University of Bologna, set himself the task. For two decades he has worked on it.

How Mariette Found the Temple of the Sacred Bulls

Now the scientific world hails his success. Where others failed he has won. The fruit of 20 years study has been published in his "La Lingua Etrusca," which defines 73 Etruscan words hitherto unknown! His researches may reveal the strange story of the lost tribe.

Every good explorer of the past must be a Sherlock Holmes. Mariette, a Frenchman, was in Alexandria looking for Coptic manuscripts. While there he noticed some sphinxes in gardens of wealthy officials. Later he saw similar sphinx figures at Giza and Cairo. The idea came to him that they might have been brought from a single ruin. But where was the ruin?

Then while walking near Saqqara, Egypt, he found a sphinx half buried in sand. Suddenly he remembered Strabo and a paragraph written by that Greek geographer two thousand years ago: "One finds also (at Memphis) a temple of Serapis in a spot so sandy that the wind causes the sand to accumulate in heaps, under which we could see many sphinxes." Mariette dug at the sphinx and found an inscription. This was it! This was Strabo's Memphis. This was the Egyptian Serapum where the sacred bulls were buried, each with a funeral worthy of a Pharaoh. Gathering workmen Mariette stripped off the sand and revealed an avenue of 141 sphinxes leading to the massive bull caskets housed in a quarter of a mile of galleries.

The Maya Calendar Compelled to Give Up Its Secret

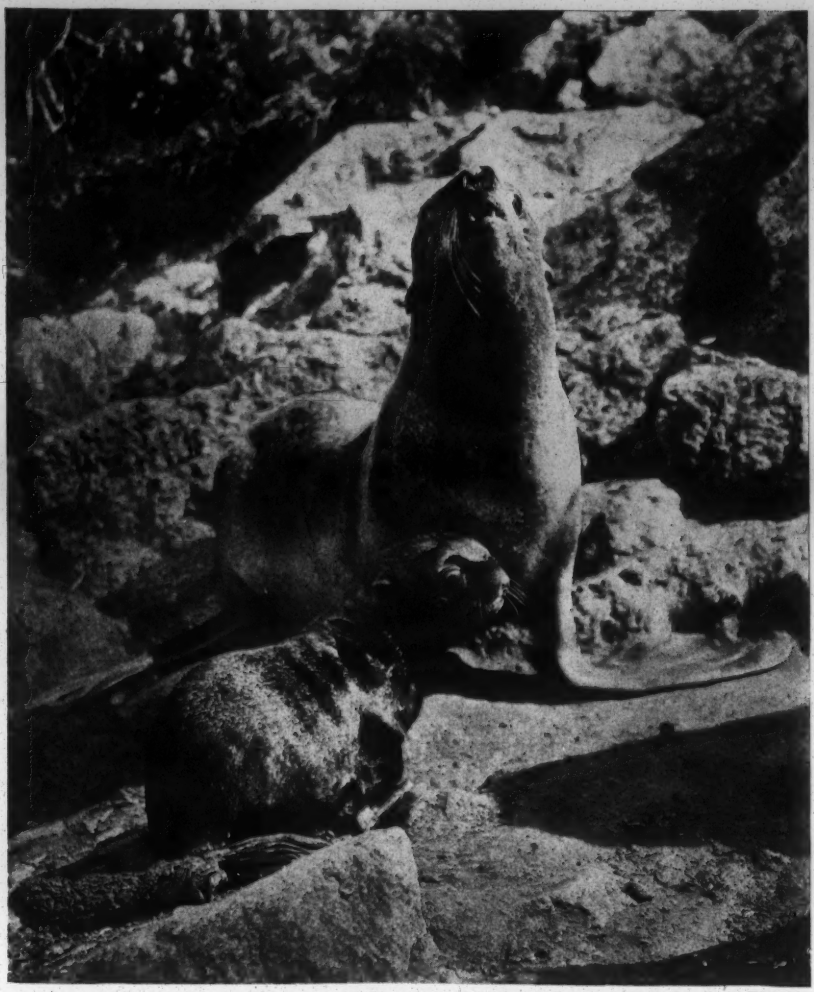
Another remarkably clever piece of scientific detection closer home only last year released the secret of the Maya calendar.

Although Yucatan was the home of the Mayas the first clew to their writings was discovered in the dusty archives of a Madrid library in 1863; the first real advance in solving the enigma of their calendar came at Dresden in 1890; important correlations were accomplished within the last twenty years at Washington, D. C.; and the final interpretation of Maya history in terms of Christian time, year for year, day for day, and hour for hour, was worked out last year at Cambridge, Mass.

Dr. Morley, in Washington, linked the Maya and Christian calendars running back to 600 B. C., with the possible error of about a month and, in 1922, predicted the elimination of that error by an appeal to astronomy. By studying the phases of the planet Venus, which were used for time-fixing by the Mayas, Dr. Spinden of Harvard, finally wound up the "Maya Calendar Case" 63 years after it was first propounded.

Dead languages have always puzzled archaeological detectives. Egyptian hieroglyphics were just so many mystifying sketches until the Rosetta stone came to light. Numerous scholars over a period of 230 years worked on cuneiform writing before the key to the Sumerian language was found and could be used to unlock the clay tablet library of Ashurbanipal containing the vast literature of man's earliest, well-developed civilization. With one thrust the long-awaited discovery opened the door to 3,000 more years of man's history.

A tough bone for anyone to chew on was the cuneiform "arrow head" text Pietro del Valle copied in 1621 and brought back from the ruins of Persepolis in Persia. Two hundred years passed. The scholars trying to decipher cuneiform had made a little progress. True, they found that Darius, Hystaspes, and Xerxes were the subjects of the paragraphs in code. They found that they were working with a syllabic writing like shorthand. But the "case'



© Photograph by Walter I. Lembkey, U. S. Bureau of Fisheries

A MOTHER SEAL AND HER NEW-BORN PUP

After the second year each cow seal bears one pup annually for about ten years. The fur seal pup, from its birth until it leaves the islands in winter, is nourished on milk. The killing of the mother seals while at sea, where they are obliged to go for food, therefore results in the death of their pups by slow starvation, and is a most serious injury to the herd (See Bulletin No. 5).

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Uncle Sam Takes a Census of Seals

THE UNITED STATES Bureau of Fisheries has been counting noses on the Pribilof Islands and finds that the fur seal herd numbers 871,513.

When the United States, by agreement with Russia, Japan and England, stopped all killing of seals on the Pribilof Islands in 1912 the herd had been reduced to 215,738 seals. No seals were taken for five years after that date. But since 1917 a limited number have been killed each year. Under government protection the herd has increased 400 per cent in 16 years.

It is estimated that the Pribilof rookeries once herded 3,000,000 seals and officials expect that the guarded herd will again attain that number within a few years. The seal population grows about 7 per cent each year.

Russian Navigator Found Islands After Three-Year Search

The Pribilofs consist of five islands, lying in the Bering Sea, about 200 miles north of the Aleutian chain. St. Pauls and St. Georges Islands, the largest and only ones of the group that are inhabited, are each slightly more than 30 square miles in area. The other three are merely jutting rocks with a combined area no larger than a fair-sized New England farm.

The islands are black and desolate. Their barren, volcanic peaks and rocky shores are hostile to vegetation. In the winter they are covered with ice and snow, and whipped by the frigid Arctic gales. During the summer months the fog that envelops the whole area is so dense that the sun's direct rays rarely touch the soil. As a result the climate is uncomfortable, cold and damp. Toward autumn the wind clears the atmosphere and here and there grass and mosses make the best of the short fogless and iceless season. Only a few years ago the inhabitants of the islands were entirely isolated from the rest of the world for six months of the year, but the radio has changed that condition.

When Pribilof, the Russian navigator, whose name the islands bear, landed there in 1786, after three years' search for the breeding grounds of the seals that frequented the north Pacific and Bering Sea waters, he found no human life, but millions of seals. He was followed by Russians and later by natives from the Aleutian Islands. Russians and a few Americans make up the present population, most of whom are connected with the government sealing and fox raising industries.

Bulls, Cows, Pups and Bachelors

While seals are sometimes known as sea bears, their names, strange to relate, follow those of cattle, and dogs, and even human beings. The adult male is called a "bull" and the female a "cow." But baby seals are neither "cubs" or "calves." Men call them "pups." The young males fare better, taking a name of human origin—"bachelors."

The more rocky the shore, the more the seals like it during the breeding season, for the harems (the seal families) forsake the few smooth spits on the islands and establish their rookeries (brooding places) among the broken rocks along the shore, or on the sides of rocky hills. From the rim the rookeries appear to the eye as a mass of black splotches continually moving, while to the ear comes a blend of loud grunts and barks. Each of these splotches represents a harem of 50 or 60 cows and, perhaps, twice at many pups, which are protected by a bull.

moved slowly until the most interesting cipher hunter of them all, Major Henry Rawlinson, went after it.

What detective in fiction is more interesting than this amateur philologist using up his annual leave sitting on the hot sands at Behistun with field glasses pressed to his eyes. He drops the glasses a moment and makes curious lines on a paper; once again he trains his lenses on the red cliff before him. High up an ancient tyrant has carved an eternal billboard of his own prowess and fame. Although he illustrated his self-advertisement the poster was a "flop." Nobody could read it.

Still Rawlinson's curiosity was aroused and so he sat on the sand scrupulously copying cuneiform bold face type hoping to discover what the vain king was trying to shout across the millenniums. After a year's study of his copybook Rawlinson sent to London a translation of the first two paragraphs containing the name, titles and genealogy of Darius the Great.

Darius' generous remarks on the subject of himself were not nearly so important as Rawlinson's solving of the Sumerian cuneiform cipher. With Rawlinson's key Smith went to clay tablets found in the Euphrates Valley and read from them the story of a flood like that recounted in the Bible and another story of a baby in the bullrushes that closely parallels Moses' experience. "Hen tracks" on the tablets revealed the Hammurabi Code of the first recorded laws and also the business letters, deeds and marriage contracts of Abraham's people.

Many Kings of Egypt Found in One Unfinished Tomb

Sometimes the Sherlock Holmes type; subtle, mind-leaping, scientific, is not so effective as a strong-arm, precinct captain, type. Superthird degree methods once forced a confession that revealed the most astonishing Pharaoh mummy collection in Egypt.

In 1881 the appearance of ancient papyri in the bazaar stalls gave hint that some native had made an important discovery. Suspicion fell on a certain Abdel-Rassoul, who, when the governor had carried on an investigation "with his habitual severity" (probably a beating on hands and feet with a stick) meekly led an archaeologist to an obscure shaft entrance, the deep well of an unfinished tomb for Queen Astemkheb. There the scientist came upon a catacomb crammed with the kings of early Egypt, the mummies from many empty Pharoah tombs, that had been secretly removed to this out-of-the-way pit after a tomb-robbing scandal had alarmed officialdom 3,000 years ago!

Then there is young Casteret with an exploit in 1923 for science's sake. Casteret was exploring a cave in southern France, hoping to find the dwelling place of cavemen known to have lived in the region 20,000 years ago. He penetrated the grotto until the stream running through it touched the roof!

Were there, beyond the blockade, more galleries which might have been attainable in the Ice Age? He resolved to find out.

Taking a deep breath Casteret dived into the cave stream and soon found another passage. Later he swam through again with candles and matches in a rubber cap. His daring was doubly rewarded, for there, shut in a chamber in the hills, he found the statue of a cave bear, the largest prehistoric statue ever discovered, and in the clay bear's flanks were the spear marks by which the cavemen showed what they would do to any bear that tried to invade their homes.

At Pueblo Bonito They Actually Sifted the Evidence

Of course when a detective, in or out of a book, speaks of "sifting the evidence," he speaks figuratively, but the archaeologist literally sifts. At Pueblo Bonito 100,000 tons of sand and rock from the ruins were put through the sieve. Carter and Carnarvon moved debris shovel by shovel for 16 years before they fell upon the tomb of Tutankhamen.

Mounds that were Nineveh and Ur the archaeologists have passed through screens which gave up emeralds, gold beads, carved ivory, and coins. It was screenings which gave evidence to the National Geographic Society expedition at Pueblo Bonito of the lost Indian culture; of the plants grown, of toys the children played with, and of the perches to which the sacred clan macaws were chained.

In the refuse piles of vanished cities the explorer culls out bits of broken pottery and glass. From the sweepings of a dead people he learns how and when they lived.

Calendars in tree rings have been used in a delicately drawn scheme to wrest the secret of Pueblo Bonito's age. The question was: How long ago did an Indian people live in the big prehistoric apartment house in Arizona?

Log supports found in the ruins gave Dr. Neil M. Judd an idea. If he could match rings of these log cross-sections with logs of known dating, he might fix the age. Working with Dr. A. E. Douglass he traced back the tree calendar through the oldest living trees and then through cross-sections of logs in modern pueblos which had been salvaged by the Indians from broken-down Spanish missions.

Still two gaps in the ring years remained. But one of them has now been closed and the explorers are hopeful of closing the other soon. The search, discouraging at times, spread over a period of six years, but it may at last yield by tree "prints" the exact year some ten centuries ago when the last of the Bonitans fled from their monumental communal home.

The bachelors are not allowed to come near the harems but occupy "hauling grounds," on smooth rocks or sandy beaches, outside the family circles. Sometimes a bachelor raids a harem and if successful in his fight with the bull, he takes away a cow or two.

As cold weather approaches, the cows and newborn pups leave the islands and go south, followed shortly afterward by the bulls. They never touch land until their return to the Pribilofs in the spring. The two-to three-months-old pups who have been living on their mother's milk and scarcely know how to swim, are forced to make their own way without help from the rest of the family. As a result, 50 per cent of them, it is estimated, die before the next season.

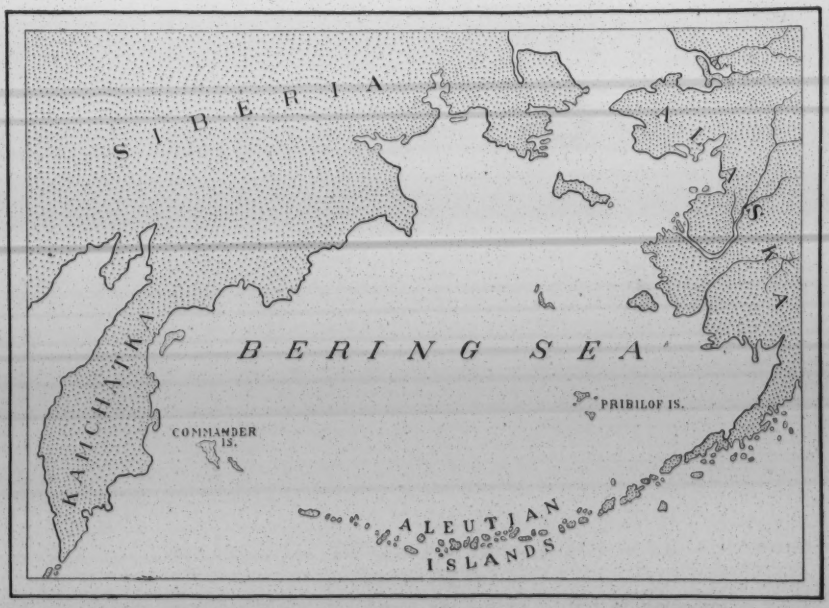
Government Auctions Seal and Fox Furs at St. Louis

Scientific propagation is showing its favorable effect upon the herds annually. Only surplus males are killed for their pelts. The best furs are taken from seals under five years old.

The Government also successfully maintains and propagates blue and white foxes on the Pribilofs which add to the revenue already received from the sealing industry. Unlike the foxes on the Aleutian Islands farms where the little animals are inclosed in chicken-wire cages, the Pribilof foxes run wild.

Most of the pelts of both the seals and foxes are auctioned off in the St. Louis fur market. On October 15 the Government offered for sale to the highest bidder 13,200 seal skins, 278 blue fox and 15 white fox skins.

Bulletin No. 5, December 3, 1928.



THE PRIBILOF ISLANDS LIE 200 MILES NORTH OF THE ALEUTIANS